

User-Augmented Visualizations for Targeted Evaluation of Systems and Technologies, Phase I

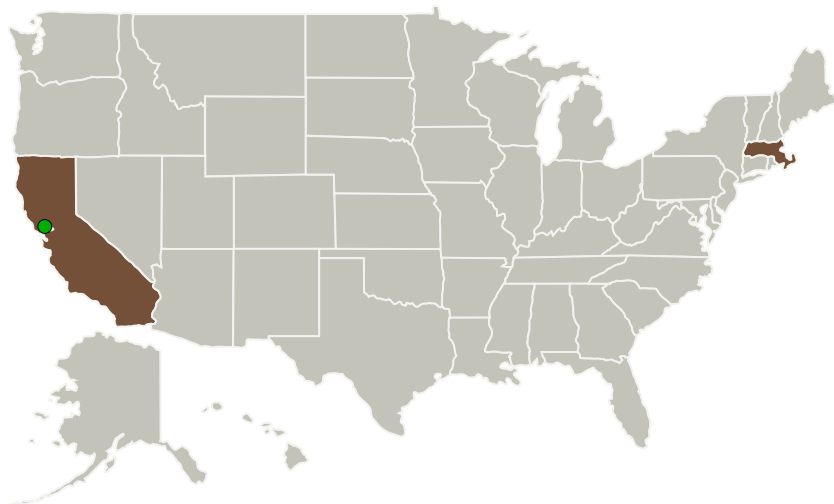
Completed Technology Project (2011 - 2011)



Project Introduction

The operation of Unmanned Aerial Vehicles (UAVs) in the National Airspace System (NAS) is a growing area of research for NASA, but the need for substantial amounts of research on the UAV-in-NAS concept is overwhelming. Furthermore, the quantity and nature of research questions on UAV-in-NAS operations are somewhat unpredictable as this research progresses, thereby requiring NASA to have flexible research tools and adaptable methodologies. To address these issues, we propose to develop the UAV-TEST toolset (User-Augmented Visualizations for Targeted Evaluation of Systems and Technologies). UAV-TEST will be a user-centered methodology that helps streamline the research process for UAV-in-NAS research at NASA and enhances the process of generating and connecting new measures, research questions, and visualizations. This concept will be instantiated within a flexible, low-cost toolset that seamlessly integrates with current research tools at NASA. The ultimate goal of the UAV-TEST product is to enable researchers to obtain clear and rapid assessments of key human factors issues in simulated flight environments. In Phase I, we will design this concept and develop a proof of concept demonstration. In Phase II, we will develop a functional prototype that can be used alongside actual NASA studies, particularly within the UAV-in-NAS research areas.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
Aptima, Inc.	Lead Organization	Industry	Woburn, Massachusetts
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Massachusetts

Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/138559>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Aptima, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

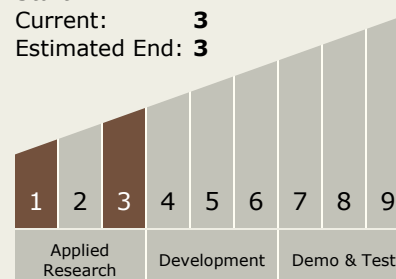
Carlos Torrez

Principal Investigator:

Kevin T Durkee

Technology Maturity (TRL)

Start: **1**
 Current: **3**
 Estimated End: **3**



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Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
 - └ TX11.4 Information Processing
 - └ TX11.4.2 Intelligent Data Understanding

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System